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RESEARCH ARTICLE

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Notulae to the Italian flora of algae, bryophytes, fungi and lichens: 14

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Abstract

In this contribution, new data concerning bryophytes, fungi and lichens of the Italian flora are presented. It includes new records and confirmations for the algal genus *Chara*, for the bryophyte genera *Bryum*, *Grimmia*, *Cephaloziella*, *Hypnum*, *Nogopterium*, *Physcomitrium*, *Polytrichastrum*, *Rhynchostegiella*, *Saelania*, and *Schistostega*, the fungal genera *Cortinarius*, *Lentinellus*, *Omphalina*, and *Xerophorus*, and the lichen genera *Acarospora*, *Agonimia*, *Candelariella*, *Cladonia*, *Graphis*, *Gyalolechia*, *Hypogymnia*, *Lichinella*, *Megalaria*, *Nephroma*, *Ochrolechia*, *Opegrapha*, *Peltigera*, *Placidium*, *Ramalina*, *Rhizoplaca*, *Ropalospora*, *Strangospora*, *Toniniopsis*, *Usnea*, and *Zahlbrucknerella*.

Keywords

Ascomycota, Basidiomycota, Bryidae, Charophyceae

How to contribute

The text of the records should be submitted electronically to: Cecilia Totti (c.totti@univpm.it) for algae, Marta Puglisi (mpuglisi@unict.it) for bryophytes, Alfredo Vizzini (alfredo.vizzini@unito.it) for fungi, Sonia Ravera (sonia.ravera@unipa.it) for lichens. Each text should be within 1,000 characters (spaces included).

Floristic records

ALGAE

***Chara gymnophylla* A.Braun (Characeae)**

+ **TOS**: Pontremoli (Massa-Carrara), small permanent pond in the south side of Groppo del Vescovo (UTM WGS84: 32T 576818.4923766), 1119 m, 3 September 2021, leg. *A. Soldano*, det. *R. Bolpagni* (FI). – Species new for the flora of Toscana.

This species was found growing densely in a rather small (not more than 100 m^2) permanent pond, not very far from the border between the provinces of Massa-Carrara and Parma. Despite the high variability of its diagnostic characters, which led many authors to consider this species alternatively as a variety of *Chara vulgaris* L. (Mouronval et al. 2015) or as *Chara contraria* A.Braun ex Kützing (Schneider et al. 2016), *C. gymnophylla* is currently accepted as an independent species (Guiry and Guiry 2019). In Italy, *C. gymnophylla* has been recorded from Veneto, Liguria, Umbria, Lazio, and Sicilia (Bazzichelli and Abdelahad 2009; Ravera et al. 2019).

A. Soldano, R. Bolpagni

BRYOPHYTES

Bryum gemmiparum De Not. (Bryaceae)

+ **TAA**: Sarca river in loc. Le Gere near Dro (Trento) (UTM WGS84: 32T 648544.5092136), on limestone boulders emerging from the water, 127 m, 13 March 2022, *F. Prosser* (ROV BR06881); along Sarca river to the bridge north of Dro (Trento) (UTM WGS84: 32T 648908.5092363), 133 m, 13 March 2022, *F. Prosser* (ROV BR06868). – Species new for the flora of Trentino-Alto Adige.

The presence of the typical propagules, the appearance of the leaves as well as the peculiar ecology make easy to recognize this species (Holyoak 2021). It was never reported in the whole northern Italy after 1968 (Aleffi et al. 2020). At a short distance, and in the same environment, *Orthotrichum cupulatum* Brid. var. *riparium* Huebener was also collected (ROV BR06878). Incidentally, this taxon was recorded for Trentino-Alto Adige based on collections made before 1968 (Aleffi et al. 2020).

F. Prosser

Cephaloziella baumgartneri Schiffn. (Cephaloziellaceae)

+ **TAA**: Above Tempesta (Trento), above the junction of the panoramic path to Torbole, under a protrusion of the slightly humid limestone cliff facing south (UTM WGS84: 32T 644952.5077667), 309 m, 29 January 2022, *F. Prosser* (ROV BR06267). – Species new for the flora of Trentino-Alto Adige.

Although the samples were sterile, their markedly basic growth environment allow a safe identification (Hugonnot and Leica Chavoutier 2021). This species was associated with *Gymnostomum calcareum* Nees & Hornsch. var. *calcareum* (ROV BR06264).

F. Prosser

Grimmia dissimulata E.Maier (Grimmiaceae)

+ **TAA**: Valle delle Gole along the stream (Trento) (UTM WGS84: 32T 661578.5100070), on a limestone cliff, 345 m, 10 April 2022, *F. Prosser* (ROV BR06441). – Species new for the flora of Trentino-Alto Adige.

The rarity of this species in Italy is possibly explained by its recent description (Maier 2001). *Grimmia dissimulata* is morphologically close to *G. trichophylla* Grev., from which it differs mainly for short rectangular basal leaf cells, 1–2 rows of smooth and hyaline cells at the leaf border, one row of guide cells and sometimes a group of hydroids between the guide cells and the substereids. In addition, it usually grows on a basic rather than acidic substrate. Nearly in the same site, *Gymnostomum aeruginosum* Sm. var. *aeruginosum* was collected (ROV BR06586).

F. Prosser

Hypnum cupressiforme Hedw. var. *filiforme* Brid. (Hypnaceae)

+ **SAR**: La Madonnina, Santu Lussurgiu (Oristano) (UTM WGS84 32T 466684.4447104), on *Quercus ilex* L. at height of 1.50 m, 800 m, 10 May 1995, *A. Cogoni* (SA2/a); S'Abba Fittiana, Monte Tonneri, Seui (Sud Sardegna) (UTM WGS84 32T 531894.4416473), on *Quercus ilex* L., 1010 m, 7 May 1996, *A. Cogoni* (SA2/c); Trebina Ledda, Monte Arci, Morgongiori (Oristano) (UTM WGS84 32T 478521.446034), on *Quercus ilex* L. at height of 1.50 m, 742 m, 16 April 2001, *A. Cogoni* (SA2/d); Punta Sebera, Teulada (Sud Sardegna) (UTM WGS84 32T 485635.4322298), on *Arbutus unedo* L., 930 m, 14 April 2002, *A. Cogoni* (SA2/e); Monte Maiore, Arbus (Sud Sardegna) (UTM WGS84 32T 462811.4382655), on *Arbutus unedo* L. at height of 1.50 m, , 700 m, 14 March 2003, *A. Cogoni* (SA2/f); Monte Ortobene (Nuoro) (UTM WGS84 32T 531544.4463138), on *Quercus ilex* L. at height of 1 m, , 830 m, 29 May 2003, *A. Cogoni* (SA2/g); Ortachis, Bolotana (Nuoro) (UTM WGS84 32T 0492237.4466648), on *Acer monspessulanum* L. at height of 0.60 m, 940 m, 2 June 2003, *A. Cogoni* (SA2/h); Assemini, Mitza Fanebas (Cagliari), along the river Rio Santa Lucia (UTM WGS84 32T 488988.4331529), on vertical cliffs, 238 m, 25 May 2021, *S. Poponessi*, *A. Cogoni* (SA2/i). – Variety new for the flora of Sardegna.

According to Aleffi et al. (2020), *Hypnum cupressiforme* var. *filiforme* is well distributed in the Italian territory, but not yet recorded for some regions, including Sardegna. It is a Mediterranean-boreal moss, growing on tree trunks and vertical cliffs (Dierßen 2001). This taxon may well just represent an ecological variant, but will be regarded at a varietal level until its position is clarified (Hodgetts et al. 2020).

S. Poponessi, A. Cogoni

Nogopterium gracile (Hedw.) Crosby & W.R.Buck (Leucodontaceae)

+ **LIG**: Portofino Regional Park, Portofino (Genova), on the rock indicating the site "Pietre strette" (UTM WGS84: 32T 514152.4907907), 465 m, 5 June 2022, *M. Tiburtini* (PI 061636). – Species confirmed for the flora of Liguria.

Nogopterium gracile can be usually found on shaded rocks, more rarely on bark and soil. The general appearance is given by numerous, short, curved branches above, which all point to the same direction. Even though this species is widespread in Italy (Aleffi et al. 2020), its most recent record for Liguria dates back to 1902 (Aleffi, pers.

comm.). *Nogopterium gracile* was found growing in a pure patch on the boulder along the pathway where the locality "Pietre Strette" is written with red paint in a deciduous forest. The digitized specimen can be found at http://erbario.unipi.it/it/erbario/view?id=1865491.

M. Tiburtini

***Polytrichastrum alpinum* (Hedw.) G.L.Smith (Polytrichaceae)**

+ **SIC**: Dagalotti del Diavolo, near Contrada Galvarina, south-western slope of Mount Etna (UTM WGS84: 33S 496530.4174438), on soil in volcanic rock fissures, 1880 m, 21 June 2022, leg. *S. Sciandrello*, det. *G. Bacilliere*, *M. Puglisi* (CAT). – Species confirmed for the flora of Sicilia.

Polytrichastrum alpinum is a circumpolar boreo-arctic montane species, frequently occurring on soil in cliff crevices, block scree, and forest floors; it is occasionally found on rotten logs. This species is quite rare in southern Italy, where it was mostly reported before 1968 (Aleffi et al. 2020). In Sicilia it was previously found in the Madonie mountains more than a century ago (Bottini 1890; Lojacono Pojero 1890). In Mt. Etna, *P. alpinum* was found at the entrance of a cave, with some individuals of *Brachytheciastrum velutinum* (Hedw.) Ignatov & Huttunen.

M. Puglisi, G. Bacilliere, S. Sciandrello

***Physcomitrium eurystomum* Sendtn. subsp. eurystomum (Funariaceae)**

+ **VEN**: south-west of Pellegrina (Verona) (UTM WGS84: 32T 678818.4995715), in a paddy field, 8 m, 1 October 2021, *F. Prosser* (ROV BR06644). – Species new for the flora of Veneto.

Confirmed in Italy after 1968 only for Sicilia (Puglisi and Privitera 2018), it was found on the mud of a recently dried up paddy field. There was no previous report for Veneto. It is a declining species, indicated as VU at the European level by Hodgetts et al. (2019).

F. Prosser

***Rhynchostegiella curviseta* (Brid.) Lindb. (Brachytheciaceae)**

+ **TAA**: On the right bank of the Avisio stream west of the confluence with the Rio Molini (Trento) (UTM WGS84: 32T 665420.5113081), on a humid and shady porphyry cliff, 294 m, 26 February 2022, *F. Prosser* (ROV BR06904); small waterfall of Rio Molin at the confluence with Avisio (Trento), under Verla di Giovo, shady dripping on porphyry (UTM WGS84: 32T 665625.5113116), 306 m, 26 February 2022, *F. Prosser* (ROV BR06908). – Species confirmed for the flora of Trentino-Alto Adige.

The two populations observed, both fertile, are found on abundant travertine deposit. This species is quite common in Italy (Aleffi et al. 2020), and was previously reported in Trentino-Alto Adige only at Calavino at the end of the 20th century (Venturi 1899).

F. Prosser

Saelania glaucescens (Hedw.) Broth. (Ditrichaceae)

+ **CAL**: Monte Cocuzzo, Mendicino (Cosenza) (UTM WGS84: 33S 598506.4341702), on soil, 1125 m, 30 January 2022, *D. Puntillo* (CLU No. 4532). – Species confirmed for the flora of Calabria.

Saelania glaucescens is recognizable for the striking, glaucous green colour of the leaves, which is caused by a covering of waxy rods on the leaf surface. It is an arctic-montane species, growing on soil in the crevices of basic rocks or in sheltered niches on calcareous crags. It is rare in southern Italy, and in Calabria it was previously reported only from Gioia Tauro (Bottini et al. 1883, under the name *Leptotricum glaucescens* Hampe).

D. Puntillo

Schistostega pennata (Hedw.) F.Weber & D.Mohr (Schistostegaceae)

+ **LAZ**: Grotta Pozzo del Diavolo, Monte Venere, Caprarola (Viterbo) (UTM WGS84: 33T 267802.4691616), on lava rock, at the bottom of the volcanic cave with low light, 814 m, 10 May 2021, *T. Scalise*, *E. Scassellati* (RO, Herb. Iberite). – Species confirmed for the flora of Lazio.

Schistostega pennata is a peculiar moss species well known for its luminescent appearance when growing in very dark places, due to the light reflective properties of the convex cells of its persistent protonema. It is a boreal-temperate species, that can be found in deep shade on acid soil, in dark recesses and in the entrances to caves and mine shafts (Birks and Blockeel 2014). In Italy, *Schistosega pennata* occurs in Valle d'Aosta, Piemonte, Lombardia, Trentino-Alto Adige, Puglia, and with old records, in Liguria (Aleffi et al. 2020); in Lazio, its presence was only generically reported by Brizi (1897). In the new locality, *S. pennata* is present as a protonema, at the bottom of a cave, in association with *Isopterygiopsis pulchella* (Hedw.) Z.Iwats.

M. Iberite, E. Scassellati, M. Aleffi

FUNGI

Cortinarius scaurotraganoides Rob.Henry (Cortinariaceae)

+ **LIG**: Sassello (Savona) (UTM WGS84: 32T 461088.4925631), under *Quercus robur* L. and *Pinus sylvestris* L., 519 m, 17 November 2012, *F. Boccardo* (GDOR 2869). – Species new for the flora of Liguria.

Cortinarius scaurotraganoides is mainly characterized by the whitish-cream to ochre brown pileus, sometimes with faint bluish tinges, flesh cream to ochre but orange at the base of the stem and characteristic fruity odour similar to that of *Cortinarius traganus* (Fr.) Fr. (Bidaud et al. 1993; Brandrud et al. 2012). The diffusion of *C. scaurotraganoides* is documented in France and Hungary based on morphological and genetic evidence (Bidaud et al. 1993; Brandrud et al. 2012; Liimatainen et al. 2020), but this species is

also present in Italy (Onofri et al. 2013) and Spain (Brandrud et al. 2012). In Italy, it was reported from Piemonte and Lombardia (Onofri et al. 2013).

F. Boccardo, F. Dovana

***Lentinellus ursinus* (Fr.) Kühner (Auriscalpiaceae)**

+ **CAL**: Botanical Garden, University of Calabria, Rende (Cosenza), on a fallen decaying oak branch under a downy oak (*Quercus pubescens* Willd.) tree at the edge of a mixed deciduous oak coppice stand, *Q. pubescens* as prevailing species (UTM WGS84: 33S 605916.435729), 200 m, 25 October 2021, *G. Sicoli*, *A.B. De Giuseppe*, *N.G. Passalacqua* (CLU F320). – Species new for the flora of Calabria.

A fasciculate cluster of five basidiomata referable to the genus *Lentinellus* Karst. was detected on a partially decayed branch fallen from an oak tree (*Q. pubescens*) standing over it. Pilei were spathulate, less than 5 cm wide, and laterally attached to the wood via a very rudimentary stipe. The above side of the pileus was felty and dull, brown-to-bay and slightly hirsute in the centre, paler and smoother towards an involute margin. The downside showed crowded and irregularly toothed gills producing hyaline, subglobose, finely ornamented and strongly amyloid spores, measuring 3.0–4.5 × 2.5–3.5 µm. The above characteristics led to identify this saprotrophic fungus as *L. ursinus* (Courtecuisse and Duhem 1995; Segedin 1996; Käärik 1997). *Lentinellus ursinus* is currently recorded mainly for northern and central Italy, while in southern Italy it has been recorded only in Puglia (Onofri et al. 2013).

G. Sicoli, A.B. De Giuseppe, N.G. Passalacqua

***Omphalina pyxidata* (Bull.) Quél. (Omphalinaceae)**

+ **CAL**: Botanical Garden, University of Calabria, Rende (Cosenza) (UTM WGS84: 33S 605940. 4357174), on the ground in a grassy open space between two oak trees belonging to *Quercus ilex* L. and *Q. pubescens* Willd., 215 m, 3 November 2021, *A.B. De Giuseppe*, *N.G. Passalacqua*, *G. Sicoli* (CLU F321). – Species new for the flora of Calabria.

A dozen sparse pileate and stipitate basidiomata were detected on the ground in a 10m^2-wide grassy clearing between a downy oak tree (*Q. pubescens*) and a holm oak tree (*Q. ilex*). Pilei were infundibuliform, vividly brownish, striate at margin and less than 3 cm wide. Stipes were slender, sometimes flexuose, glabrous and more or less concolorous. The hymenophore consisted of pale brown, rather distant and decurrent gills producing hyaline, amygdaloid and smooth spores, measuring 7.5–8.5 × 4.5–5.0 µm. Cystidia were not observed. The above characteristics led to recognise this fungus as the saprotroph *Omphalina pyxidata* (Lange 1992; Courtecuisse and Duhem 1995; Vizzini et al. 2012). *Omphalina pyxidata* has been mainly observed in northern and central Italy, while records in the south have only been referred to Sicilia (Onofri et al. 2013).

A.B. De Giuseppe, N.G. Passalacqua, G. Sicoli

Xerophorus olivascens (Boud.) Vizzini, Consiglio & M. Marchetti (Callistosporiaceae)

+ **CAL**: Botanical Garden, University of Calabria, Rende (Cosenza) (UTM WGS84: 33S 605966. 4357130), on the ground under the crown of an Atlas cedar tree [*Cedrus atlantica* (Endl.) Manetti ex Carrière], 220 m, 15 November 2021, *N.G. Passalacqua*, *A.B. De Giuseppe*, *G. Sicoli* (CLU F322). – Species new for the flora of Calabria.

A group of five small, gregarious collybioid basidiomata were observed on the ground among the dead needles of a planted tree of *Cedrus atlantica*. The youngest pilei were convex and narrowly involute at the edge, the most mature were applanate, slightly depressed, matt, smooth to wrinked, dark grey-brown in the centre, light greenish at the edge, and 1.5–3.5cm wide. The lower side of the pileus showed rather distant and emarginated gills, which were green-yellowish and were supported by a concolorous, slender, tapering, flexuose and fibrillose stipe. Spores were amygdaliform, smooth, hyaline, and 9–11 × 5–7µm-sized. Based on the above characters and ecology, this fungus had first been described as *Callistosporium olivascens* (Boud.) Bon, more specifically as *C. olivascens* var. *aerinum* (Quél.) Bon, but its current name is *Xerophorus olivascens* (Moser 1986; Courtecuisse and Duhem 1995; Vizzini et al. 2020). In Italy, *X. olivascens* seems to have been reported in the northern and central regions, previously as *Callistosporium olivascens* (Boud.) Bon, but apparently never in the south (Onofri et al. 2013).

N.G. Passalacqua, A.B. De Giuseppe, G. Sicoli

LICHENS

Acarospora similis H.Magn. (Acarosporaceae)

+ **EMR**: Parma University campus (Parma), on the woody fence at the Ambolana building (UTM WGS84: 32T 604139.4957548), 70 m, 29 October 2020, leg. *J. Nascimbene*, det. *J. Nascimbene* (BOLO). – Species new for the flora of Emilia-Romagna.

This lignicolous species was rarely collected in Italy where, however, it is perhaps more widespread on worked timber (fences, roofing tiles), from the dry submediterranean to the subalpine belt in relatively nutrient-enriched situations (Nimis 2016).

J. Nascimbene

Agonimia repleta Czarnota & Coppins (Verrucariaceae)

+ **ITA** (**SAR**): near the road 2 km SW of San Pantaleo, Arzachena (Sassari) (UTM WS84: 32T 537499.4542800), on bark of *Quercus coccifera* L., 40 m, 30 April 2012, *J. Malíček* (PRA). – Species new for the flora of Sardegna.

Agonimia repleta is characterized by a granular-verrucose to minutely squamulose thallus with black, smaller, roughened pyriform perithecia. It is widespread in Europe mainly on bark among mosses, often in riparian habitats. In temperate forests, it is common on bark at bases of deciduous trees, especially beech.

J. Malíček, S. Ravera

***Candelariella boleana* Etayo, Palice & T.Sprib. (Candelariaceae)**

+ **ITA** (**TOS**): Pratovecchio (Arezzo), in a beech forest near Croce Gaggi (UTM WGS84: 32T 724258.4854840), on bark of *Fagus sylvatica* L., 1150 m, 19 March 2022, leg. *S. Di Natale*, *E. Bianchi*, *R. Benesperi*, det. *S. Di Natale* (FI). – Species new for the flora of Italy (Toscana).

Candelariella boleana is an epiphytic species, widespread in southern and central Europe (Nimis et al. 2022) and with a single record from Swiss Alps (Nimis et al. 2018). Its thallus consists of small scattered yellow to greenish-yellow granules. *Candelariella boleana* is the only species known in the genus with orbicular spores, 16–32 per ascus, and can thus be easily distinguished from all other species (Etayo et al. 2009).

S. Di Natale, E. Bianchi, R. Benesperi

***Cladonia foliacea* (Huds.) Willd. (Cladoniaceae)**

+ **VDA**: Arbaz, Challand-Saint-Anselme (Aosta) (UTM WGS84: 32T 401107.5063836), on soil, 1380 m, 15 June 2021, *D. Isocrono*, *S. Ongaro* (ORO). – Species confirmed for the flora of Valle d'Aosta.

According to Nimis (2016), *C. foliacea* is a terricolous lichen rather rare in the montane belt in Italy, that has been rediscovered, together with *C. rangiformis* Hoffm., in an open grassland. Its presence in Valle d'Aosta was previously only known in few sites based on literature from the early 20th century (Henry 1911; Vaccari 1914; Cengia Sambo 1928). A bibliographic 50 years old record (Tosco 1973, sub *C. foliacea* var. *alcicornis* and var. *convoluta* Vain.) attested its occurrence in Valli di Cogne in a single locality (bosco di Sylvenoire), recent investigations in the same area found no evidence of it.The exsiccatum from Tosco's collection is kept in VER and has now been proven to be correct.

D. Isocrono, S. Ongaro

***Cladonia rangiformis* Hoffm. (Cladoniaceae)**

+ **VDA**: Arbaz, Challand-Saint-Anselme (Aosta), on soil (UTM WGS84: 32T 401107.5063836), 1380 m, 15 June 2021, *Deborah Isocrono*, *Silvia Ongaro* (ORO). – Species new for the flora of Valle d'Aosta

According to Nimis (2016), *Cladonia rangiformis* is one of the most common and abundant species of the genus in Italy. This sample was collected in an open pasture in a dry area.

D. Isocrono, S. Ongaro

***Cladonia rei* Schaer. (Cladoniaceae)**

+ **VEN**: Grave di Ciano, Crocetta del Montello (Treviso) (UTM WGS84: 33T 271077.5080389, 271087.5080257), on calcareous soil in dry grasslands, 131–136 m,

18 February 2022, leg. *J. Nascimbene*, det. *G. Gheza*, *J. Nascimbene* (BOLO). – Species confirmed for the flora of Veneto.

Cladonia rei is a widespread but poorly known species, which is easily overlooked or mistaken for other species due to its highly polymorphic podetia (Gheza and Nimis 2021). Here it was recorded together with *C. chlorophaea* (Sommerf.) Spreng., *C. cryptochlorophaea* Asahina, *C. rangiformis* Hoffm., and *C. symphycarpa* (Flörke) Fr. in dry grassland patches attributed to the Natura 2000 Habitat 62A0 "Eastern submediterranean dry grasslands (*Scorzoneretalia villosae*)". This species is widespread in dry grasslands of the western Po Plain (Gheza 2015, 2018, 2020), on both siliceous and carbonatic soils, and is likely to be common also in the eastern Po Plain, in similar habitats. The only previous record in Veneto was from Forcella Franche in the upper Valle del Mis (Cengia Sambo 1934).

G. Gheza, J. Nascimbene

Graphis pulverulenta (Pers.) Ach. (Graphidaceae)

+ **UMB**: Monte Coscerno (Perugia) (UTM WGS84: 33T 329504.4733358), on *Fagus sylvatica* L., 910 m, 25 October 1997, leg. *G. Massari*, *S. Ravera*, det. *S. Ravera* (Herb. Ravera 4679); Amelia (Terni) (UTM WGS84: 33T 293192.4713927), on *Quercus pubescens* Willd., 500 m, 8 March 1999, leg. *G. Massari*, *S. Ravera*, det. *S. Ravera* (Herb. Ravera 2806). – Species new for the flora of Umbria.

+ **LAZ**: Le Chiuse, Ischia di Castro (Viterbo) (UTM WGS84: 32T 717621.4712467), on *Populus* sp., 220 m, 25 August 1993, leg. *A. Alessandrini*, *S. Ravera*, det. *S. Ravera* (PAL); Canale Monterano (Roma) (UTM WGS84: 33T 259460.4668460), on *Corylus avellana* L., 270 m, 7 December 1998, leg. *G. Brezzi*, *S. Ravera*, det. *S. Ravera* (PAL); Bosco di Gattaceca, Monterotondo (Roma) (UTM WGS84: 33T 306274.4658340), on *Carpinus orientalis* Mill., 130 m, 10 February 1999, *G. Rinieri* (Herb. Ravera 3787); Canale Monterano (Roma) (UTM WGS84: 33T 259138.4669049), on *Alnus glutinosa* (L.) Gaertn. along the river Bicione, 175 m, 9 March 2004, leg. *S. Caporale*, *S. Ravera*, det. *S. Ravera* (Herb. Ravera 4640); Canale Monterano (Roma) (UTM WGS84: 33T 259138.4669049), on *Alnus glutinosa* (L.) Gaertn. along the river Mignone, 250 m, 26 March 2004, leg. *S. Caporale*, *S. Ravera*, det. *S. Ravera* (Herb. Ravera 4639). – Species new for the flora of Lazio.

+ **MOL**: Piano di San Vito, Macchia di Isernia (Isernia) (UTM WGS84: 33T 435210.4601697), on *Fraxinus ornus* L., 300 M, leg. *S. Caporale*, *M. Giancola*, *G. Potenza*, *S. Ravera*, det. *S. Ravera* (Herb. Ravera 4865).

Graphis pulverulenta is an epyphitic crustose species of the *G. scripta* group, cha racterised by apothecia with mostly acute ends and widely exposed white- to grey-pruinose discs. Pending a revision of the Italian material, these units are treated as separate species by Nimis and Martellos (2022). The records listed as "Herb. Ravera" are reported in Nimis and Martellos (2022) *sub G. scripta* (L.) Ach.

S. Ravera

Gyalolechia fulgida (Nyl.) Søchting, Frödén & Arup (Teloschistaceae)

+ **MAR**: Pietrarubbia (Pesaro e Urbino) (UTM 33T 289295.4852237), on sandstone calcareous conglomerate, 730 m, 9 April 2022, *F. Santi* (BOLO). – Species new for the flora of Marche.

Gyalolechia fulgida is a crustose-placodioid lichen, found on calcareous rock, with an optimum in the Mediterranean belt (Nimis 2016). The record from San Leo (Rimini), referred to Marche (Nimis and Tretiach 1999), is now to refer to Emilia-Romagna, because the Municipality currently belongs to this administrative Region.

F. Santi, C.M. Giorgi, M. Muscioni

Hypogymnia farinacea Zopf (Parmeliaceae)

+ **LIG**: Slopes of Mount Pietravecchia, along the "Sentiero degli Alpini" (Imperia) (UTM WGS84: 32T 393671.4871558), on *Larix decidua* Mill., 1613 m, 26 June 2022, *P. Giordani*, *D. Locati* (GE). – Species new for the flora of Liguria.

Hypogymnia farinacea is a foliose lichen characterized by a grey upper surface, largely covered by soredia arising from wrinkles. The lower surface is black, rugose, without rhizines. The medulla soon becomes hollow. According to Nimis and Martellos (2022), it is rather common in the coniferous forests of the subalpine belt of the Alps, while it becomes rare in the Apennines. The site of Mount Pietravecchia is the first known site in Liguria, although this species was already known from a stand on the Emilian side of the Ligurian Apennines (Brunialti et al. 2001). On Mount Pietravecchia it grows on the trunk of larch trees in epiphytic communities dominated by *H. physodes* (L.) Nyl., *H. tubulosa* (Schaer.) Hav., *Parmeliopsis ambigua* (Hoffm.) Nyl. and *Brioria* sp. pl.

P. Giordani, D. Giugia, G. Canali

Lichinella myriospora (Zahlbr.) P.P.Moreno & Egea ex M.Schultz (Lichinaceae)

+ **ITA** (**EMR**): Foreste Casentinesi National Park, below Passo la Calla, km 33 of the SS 310 (Forlì-Cesena) (UTM WGS84: 32T 722942.4864009), on limestone fragments in dry grassland, 735 m, 9 August 2015, *W. v. Brackel*, *G. v. Brackel* (HBG). – Species new for the flora of Italy (Emilia-Romagna).

This species belongs to a taxonomically difficult group of crustose cyanolichens in the genera *Lichinella* Nyl. and *Psorotichia* A. Massal. Species with thallinocarpia, as our specimen, belong to *Lichinella*. Within this genus, the separation between *Lichinella myriospora* and *Psorotichia suffugiens* (Nyl.) Forssell, the latter not yet recombined but actually belonging to *Lichinella* according to our own unpublished studies, is problematic. Until now it is based only on a stronger development of the thalline web covering and partly separating the hymenium. *Lichinella myriospora* is known from Europe (Croatia, Czech Republic, France, Slovenia, Spain, and Ucraine), Asia (Mongolia and Tukey) and North America (Mexico and USA) (Zahlbruckner 1922; Navarro-Rosinés 1992; Roux et al. 2003; Schultz 2005; Candan and Schultz 2015; Lin and Qiang 2021; Vondrák et al. 2022).

W. v. Brackel, M. Schultz

***Megalaria pulverea* (Borrer) Hafellner & E.Schreiner (Ramalinaceae)**

+ **LOM**: Boschi del Giovetto near Giuadel, Azzone (Bergamo) (UTM WGS84: 32T 586786.5090275), on bark of *Abies alba* Mill. in a moist coniferous forest, 1230 m, 4 January 2022, leg. *G. Gheza*, det. *H. Mayrhofer* (BOLO). – Species new for the flora of Lombardia.

Megalaria pulverea is a rare species, previously reported from Italy only once, from Trentino-Alto Adige (Nascimbene et al. 2007). The specimen reported from Lombardia, which was sterile and contained fumarprotocetraric acid, atranorin and zeorin, was collected in an old, moist coniferous stand rich in *Abies alba* Mill., on the same tree with *Ropalospora viridis* (Tønsberg) Tønsberg.

G. Gheza, H. Mayrhofer

***Nephroma tangeriense* (Maheu & A. Gillet) Zahlbr. (Nephromataceae)**

+ **LIG**: Via Groppolo, Sarzana (La Spezia), (UTM WGS84: 32T 577405.4887407), on bark, 1810, leg. *A. Bertoloni*, det. *G. Gheza*, *G. Celli*, *J. Nascimbene* (BOLO); Via del Martinello, Calice al Cornoviglio (La Spezia) (UTM WGS84: 32T 566204.4894508), on bark of *Castanea sativa* Mill., 1000 m, September 1831, leg. *A. Bertoloni*, det. *G. Gheza*, *G. Celli*, *J. Nascimbene* (BOLO). – Species new for the flora of Liguria.

+ **EMR**: Lago Calamone, Ventasso (Reggio Emilia) (UTM WGS84: 32T 60219.4914271), at the foot of an old beech, 1409 m, 9 June 2022, leg. *G. Gheza*, det. *G. Gheza*, *J. Nascimbene* (BOLO). – Species new for the flora of Emilia-Romagna.

Nephroma tangeriense is a Mediterranean-Atlantic species, typically found in humid areas (Nimis and Martellos 2022). It was assessed in the Red List of the epiphytic lichens of Italy as "vulnerable" (Nascimbene et al. 2013). This species is easily distinguished from the similar *N. laevigatum* Ach. thanks to the presence of many laminal and marginal phyllidia (Nimis 2021).

G. Gheza, G. Celli, J. Nascimbene

***Ochrolechia frigida* (Sw.) Lynge (Ochrolechiaceae)**

+ **LOM**: Lago Nero del Gavia, Ponte di Legno (Brescia) (UTM WGS84: 32T 614172.5132302), on organic soil in an alpine open habitat with grassland and siliceous rock outcrops near an alpine lake, 2378 m, 18 August 2021, leg. *G. Gheza*, *L. Di Nuzzo*, det. *H. Mayrhofer* (BOLO); between Passo del Gavia and Corno dei Tre Signori, Valfurva (Sondrio) (UTM WGS84: 32T 615195.5133099), on soil in an alpine open habitat, 2659 m, 27 July 2022, *G. Gheza*, *L. Di Nuzzo* (BOLO). – Species confirmed for the flora of Lombardia.

Ochrolechia frigida is a crustose lichen typically found on plant debris in high-altitude habitats on acidic substrates (Nimis 2016). It is easily distinguished chemically from similar species as it contains only gyrophoric acid. It was reported previously from Lombardia only from a few localities in Valtellina (Garovaglio 1838; Anzi 1860).

This species was assessed as "Regionally Extinct" in Italy in the recent Red List of terricolous lichens (Gheza et al. 2022); now it should be reassessed, being currently confirmed from the localities reported here.

G. Gheza, L. Di Nuzzo, H. Mayrhofer

***Opegrapha durieui* Mont. (Opegraphaceae)**

+ **CAL**: Porticciolo di Briatico, Briatico (Vibo Valentia) (UTM WGS84: 33S 590296.4286967), on calcareous rock, 8 m., 26 October 2013, *D. Puntillo* (CLU 16797). – Species new for the flora of Calabria.

Opegrapha durieui is a rare halophyte species confined along the Mediterranean and Atlantic coast of North Africa and Portugal (Nimis 1993), occurring in rather shaded and humid habitats. It grows on hard calcareous rocks mostly on steeply north-facing surfaces. It is often associated with *Arthonia meridionalis* Zahlbr. in the *Opegraphetum durieui* Egea & Cl.Roux 1992. In Italy it is reported for some small islands (Tuscan Archipelago, Tremiti Islands, Egadi, and Pelagie Islands), Sardegna, and more rarely for the coasts of Puglia (Nimis and Martellos 2022). In the reported site, this species grows together with the more common *Arthonia calcarea* (Sm.) Ertz & Diederich. and *A. meridionalis*.

D. Puntillo

***Peltigera venosa* (L.) Hoffm. (Peltigeraceae)**

+ **EMR**: Monte Cusna from Roncopianigi, Villa Minozzo (Reggio Emilia) (UTM WGS84: 32T 611548.4906618), on terricolous mosses in a beechwood, 1667 m, May 2022, leg. *C. Vallese*, *M. Prato*, det. *C. Vallese* (BOLO). –Species confirmed for the flora of Emilia-Romagna.

Peltigera venosa is an arctic-alpine to boreal-montane lichen, growing on bare mineral and humus soil above boulders and roadsides (Vitikainen 1994). It is generally most frequent in the Alps (Nimis and Martellos 2022). The specimen reported here was collected in a beechwood in the montane belt of the highest mountain of the Reggiano Apennine. The previous records from Emilia-Romagna date back to the 19th century (Baglietto 1871; Bracciforti 1877; Saccardo and Fiori 1894). Fariselli et al. (2020) attributed to this administrative region a record by Vitikainen (1994) based on a misinterpretation of a map that reports a record from the Oltrepo Pavese (Lombardia), based on Nocca and Balbis (1823).

C. Vallese, G. Gheza, J. Nascimbene

***Placidium lachneum* (Ach.) B.de Lesd. (Verrucariaceae)**

+ **LOM**: trail between Nona and the Gleno Dam, Vilminore di Scalve (Bergamo) (UTM WGS84: 32T 582770.5095739), on soil above siliceous sandstone at the edge of a stream, 1438 m, 9 August 2021, leg. *G. Gheza*, det. *L. Di Nuzzo*, conf. *M. Prieto* (BOLO). – Species confirmed for the flora of Lombardia.

Placidium lachneum is a squamulose lichen found mainly on soil, sometimes also in rock fissures and among mosses, in alpine grasslands. It can be distinguished from other *Placidium* species by the anticlinally arranged cells of the lower cortex, the bacilliform conidia and the prosoplectenchymatous medulla (Prieto et al. 2010). It could be confused with *P. adami-borosi* Szatala, which grows at lower altitudes; however, preliminary molecular analyses do not appear to support the distinction between these two species (Prieto et al. 2012). The peculiar lower cortex is shared with *P. velebiticum* (Zahlbr. ex Zschacke) Breuss, which has oblong conidia and thinner ascospores and rhizohyphae. The only previous record of *P. lachneum* from Lombardia dates back to 1927 (Nimis 1993).

L. Di Nuzzo, G. Gheza, M. Prieto

***Ramalina arsenii* Sérus., van den Boom & Magain (Ramalinaceae)**

+ **ITA** (**LIG**): Val Trebbia, Fontanigorda, Bosco delle Fate (Genova) (UTM WGS84: 524672.4932641), on basalt outcrops, 900 m, 2 February 2022, *G. Canali*, *P. Giordani* (GE); Val Trebbia, Fontanigorda, loc. Pianelli (Genova), on basalt outcrops (WGS84: 525370.4932867) m, 3 July 2022, *P. Giordani*, *D. Locati* (GE). – Species new for the flora of Italy (Liguria).

Ramalina arsenii is a small fruticose lichen, characterized by a pale yellowish green thallus. The erect branches develop from a basal holdfast. In old thalli, the upper part of the branches becomes extensively sorediate underside. This species belongs to a group of species morphologically similar *R. pollinaria* (Westr.) Ach. (Nimis and Martellos 2022). The material was collected from two neighbouring sites in the Ligurian Trebbia Valley, in a mixed forest dominated by *Castanea sativa* Mill., *Quercus cerris* L. and *Acer pseudoplatanus* L.

G. Canali, D. Giugia, P. Giordani

***Rhizoplaca subdiscrepans* (Nyl.) R.Sant. (Lecanoraceae)**

+ **LOM**: eastern side of the lower Valle del Vò, Schilpario (Bergamo), on siliceous stones in a scree (UTM WGS84: 32T 588525.5098047), 1200 m, 20 April 2022, *G. Gheza* (BOLO). – Species confirmed for the flora of Lombardia.

Rhizoplaca subdiscrepans has been reported scatteredly from the Alps (Nimis et al. 2018), with the only known previous Italian record located above Semogo of Valdidentro (under the name *Squamaria chrysoleuca* var. *lecanorea*: Anzi 1868; Stizenberger 1882). This is the second record from both Italy and Lombardia and the first from the Orobic Alps.

G. Gheza

***Ropalospora viridis* (Tønsberg) Tønsberg (Ropalosporaceae)**

+ **LOM**: Boschi del Giovetto near Giuadel, Azzone (Bergamo) (UTM WGS84: 32T 586786.5090275), on bark of *Abies alba* Mill. in a moist coniferous forest, 1230 m, 4 January 2022, leg. *G. Gheza*, det. *H. Mayrhofer* (BOLO). – Species new for the flora of Lombardia.

Ropalospora viridis is a rare species, previously reported from Italy only once, from Friuli Venezia Giulia (TSB); it is also included in the Red List of the epiphytic lichens of Italy as "data deficient" (Nascimbene et al. 2013). The specimen reported from Lombardia, which contained perlatolic acid, was collected on the same tree with *Megalaria pulverea* (Borrer) Hafellner & E. Schreiner.

G. Gheza, H. Mayrhofer

***Strangospora moriformis* (Ach.) Stein (Strangosporaceae)**

+ **TOS**: Eremo di Camaldoli, Poppi (Arezzo) (UTM WGS84: 32T 726441.4854718), on bark of conifer *Abies alba* Mill., 1120 m, 11 June 2021, leg. *S. Di Natale*, *L. Di Nuzzo*, *R. Benesperi*, det. *S. Di Natale* (FI). – Species new for the flora of Toscana.

Strangospora moriformis is an epiphytic crustose species, characterized by an endosubstratic or irregularly granular pale grey thallus. The apothecia are biatorine with a black to black-brown disc and an emerald-green epithecium (Nimis et al. 2022). It is included in the Italian Red List of epiphytic lichens as "near-threatened" (Nascimbene et al. 2013).

S. Di Natale, L. Di Nuzzo, R. Benesperi

***Toniniopsis verrucarioides* (Nyl.) Kistenich, Timdal, Bendiksby & S.Ekman (Ramalinaceae)**

+ **VEN**: Dolomiti Bellunesi National Park, Vette Feltrine, Mt. Pavionet (Belluno) (UTM WGS84: 32T 720600.5108735), on selciferous calcareous rocks, 2070 m, 9 August 2021, leg. *J. Nascimbene*, det. *J. Nascimbene*, *P.L. Nimis* (BOLO). – Species new to the flora of Veneto.

This arctic-alpine to cool-temperate lichen shows a minute squamulose thallus and grows in fissures and crevices of calcareous rocks in upland areas, often on species of *Placynthium* when young (Nimis 2016), as in the case of the record reported here. In general, this species has been rarely poorly collected in Italy and in the Alps (Nimis et al. 2018).

J. Nascimbene, P.L. Nimis

***Usnea intermedia* (A.Massal.) Jatta (Parmeliaceae)**

+ **LIG**: Mendatica (Imperia) (UTM WGS84: 398025.4885189), on *Picea abies* (L.) H.Karst., 26 June 2022, *P. Piccardo* (GE); Secate (Imperia) (UTM WGS84: 400063.4882795), on *P. abies*, 26 June 2022, *P. Piccardo* (GE). – Species new for the flora of Liguria.

Usnea intermedia is a fruticose-filamentous lichen characterised by a mostly pendulous thallus. The apothecia are frequent and often well developed with a fibrillose margin. This species is morphologically rather variable and needs further study (Nimis 2016). It is rather common in the subalpine belt of the Alps, while only a few stations are known in the higher areas of the southern Apennines in Abruzzo, Calabria, and

Sicilia. In the two Ligurian Alpine sites reported in this note, the species grows together with other fruticose lichens of the genera *Usnea*, *Pseudevernia* and *Bryoria*.

P. Piccardo, P. Giordani, P.L. Nimis

***Zahlbrucknerella calcarea* (Herre) Zahlbr. (Lichinaceae)**

+ **VEN**: Dolomiti Bellunesi National Park, Vette Feltrine, Mt. Pavionet (Belluno) (UTM WGS84: 32T 720600.5108735), on selciferous calcareous rocks, 2070 m, 9 August 2021, leg. *J. Nascimbene*, det. *J. Nascimbene* & *P.L. Nimis* (BOLO). – Species new to the flora of Veneto.

This cyanolichen with a minutely filamentous thallus is mainly bound to limestone and dolomite, in sheltered seepage tracks on steeply inclined surfaces (Nimis 2016). It was poorly collected in Italy, where it is known so far only from Calabria and Trentino-Alto Adige (Nimis and Martellos 2022). In the Alps, it is currently known mainly from the central-eastern part of the chain (Nimis et al. 2018).

J. Nascimbene, P.L. Nimis

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